UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

772

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/116,589	07/16/98	NISHIKAWA S	051098

MM42/1025

SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE N W
WASHINGTON DC 20037-3202

EXAMINER	
CHANG, A	
ART UNIT	**PAPER NUMBER**
2872	8

DATE MAILED: 10/25/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/116,589	Nishikawa
Examiner	**Group Art Unit**
Audrey Chang	2872

☒ Responsive to communication(s) filed on *Aug 12, 1999*.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-61* is/are pending in the application.

Of the above, claim(s) *1-27 and 31-61* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *28-30* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of claims 28-30 and 34 that are drawn to invention Group IV of species (A) in Paper No. 7 is acknowledged.

2. Claims 1-27, 31-33, 35-61 are withdrawn from further consideration by the examiner, 37 CAR 1.142(b) as being drawn to non-elected invention groups. Election was made **without** traverse in Paper No. 7. The elected claim 34 does not read on the elected species which uses a hologram means to fabricate a hologram, claim 34 is therefore withdrawn from further consideration by the examiner as being drawn to a non-elected species. Claims 28-30 remain pending in this application.

Specification

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

4. The abstract of the disclosure is objected to because it does not reflect the technical feature of the elected invention. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 28-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "volume hologram photosensitive material" recited in claims 28-30 appear to be vague and indefinite since it is not clear what does it mean by such term. A "photosensitive material" is a well known material in the art for recording hologram and a "volume hologram" is a well known type of hologram that may be recorded in a medium it is however not clear what limitation is intended for this combined term "volume hologram photosensitive material". Clarification is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Kawazoe et al (PN. 5,781,317).

Kawazoe et al teaches methods for producing holographic optical element wherein the methods comprise the step of adhering a hologram recording film (2013), having a photosensitive film (2132), on a master reflection type hologram (2011) and the step of illuminating reconstruction light to the master

hologram through the recording film so that the reflected and reconstructed light from the reflection type hologram interferes with the incident light to form interference fringes and recording such in the hologram recording film, (please Figure 37, columns 18-19). In a different embodiment, Kawazoe et al also teaches the holographic optical element production method comprises the step of adhering a photosensitive plate (2013) on one side of a master transmission type holographic optical element (2011) and the step of placing a plane mirror (2012) at the other side of the master holographic optical element such that the non-zero order or diffracted light from the master holographic optical element would be reflected by the mirror and reenter the photosensitive plate through the master hologram to interfere with the incident light that includes the zero order light in the plate to form interference fringes and recorded such in the photosensitive plate, (please see Figures 18 (a) and 18 (b) and columns 12-13). This reference has met all the limitations of the claims with the exception that it does not disclose explicitly that the recorded hologram medium or the produced holographic optical element comprises a collection of pixels including a plurality of diffraction gratings having such holographic optical elements. However since the claims fail to disclose the specific steps for carrying out the making of the plurality of holograms or holographic optical elements and it appears that making one holographic element or a plurality of them would require the same essential steps as taught by Kawazoe et al such modification would therefore have been considered as the manner in which a claimed apparatus or method intended to be employed and it does not differentiate the claimed methods from prior art methods satisfying the claimed method steps. Ex Parte Masham, 2 USPQ2d 1647 (1987).

Kawazoe et al also does not teach explicitly that the holographic optical element produced is a volume hologram and it does not disclose explicitly that the reflection type master hologram used for recording is a relief hologram. However since both volume hologram and thin hologram are known types of holograms classified by the fringes size comparing to the thickness of the recording film and since the

specification fails to disclose the criticality of having a volume hologram would overcome any problem presented in the prior art it would therefore have been an obvious variation and an obvious matter of design choice to one having ordinary skilled in the art to produce the holographic optical element as a volume hologram. A relief type of hologram is also one of the well known types of fringes may be recorded in hologram therefore to use a relief type hologram or other type of hologram as the master hologram for recording is rather an obvious variation to one skilled in the art and is an obvious matter of design choice that requires only routine skill in the art since the specification also fails to disclose the criticality of using a relief type hologram would overcome any problem stated in the prior art.

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Molteni et al (PN. 5,473,447).

Molteni et al teaches a hologram stereogram recording method wherein the method comprises the step of providing a hologram recording plate (37) on one side of a transmission hologram (H_1) that serves as the master hologram, which has a plurality of slit holograms that each represents a different view of a scene, and the step of illuminating the transmission hologram by coherence beams (36) which interfere with the coherence reference beams (38) illuminated from the other side of the recording plate (37) to produce interference fringes and to record such in the recording plate. The produced hologram (H_2) from the recording plate is a holographic stereogram which comprises a plurality of slit holograms originally recorded in the master hologram, (please see Figure 6, and columns 13-14). This reference has met all the limitations of the claim. Molteni et al teaches that the recording plate may be formed by any suitable hologram recording material but it does not disclose explicitly that it is photosensitive material. However photosensitive materials are very well known hologram recording material such modification would have been obvious to

one skilled in the art since it has been held to select a known material on the basis of its suitability for the intended use is a matter of design choice. In re Leshin, 125 USPQ 416. Molteni et al also does not disclose explicitly that the produced hologram is a volume hologram however since both volume hologram and thin hologram are known types of holograms classified only by the fringes size comparing to the thickness of the recording plate and since the specification fails to disclose the criticality of having a volume hologram would overcome any problem presented in prior art it would therefore have been an obvious variations and an obvious matter of design choice to one having ordinary skilled in the art to produce the hologram as a volume hologram.

Double Patenting

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

11. Claims 28-30 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 28-30 of copending Application No. 08/839,666. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chang whose telephone number is (703) 305-6208.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Papers related to this application may be submitted to Group 2800 through facsimile transmission. Papers should be faxed to Group 2800 via PTO Fax Center (fax number 703-308-7722) located in Crystal Plaza 4.

A. Chang

October 21, 1999 2872